

Obscure Scale

Melanaspis obscura (Comstock)

Hemiptera: Diaspididae

Potter, D. A.; Jensen, M. P.; Gordon, F. C. 1989. Phenology and degree-day relationships of the obscure scale (Homoptera: Diaspididae) and associated parasites on pin oak in Kentucky. *Journal of Economic Entomology* 82: 551-555.

Objective: To determine the first hatch of *M. obscura* crawlers on pin oak using degree-day accumulation.

Abstract: Obscure scale, *Melanaspis obscura* (Comstock), is a native armored scale that attacks oaks, *Quercus* spp., maples, *Acer* spp., hickories, *Carya* spp., and other hardwoods in the eastern USA. Stressed trees, such as those in the urban setting, are more susceptible to attack by *M. obscura*. Infestations may result in branch dieback and a weakened condition, but infested trees rarely die from *M. obscura* alone.

When necessary, insecticide sprays can be applied against the overwintering stage or the newly-eclosed crawlers of *M. obscura*. Land managers can forecast the eclosion of *M. obscura* crawlers on pin oak, *Quercus palustris* Muenchhausen, used as street trees in Kentucky, using degree-day accumulation. Crawlers begin hatching at a mean accumulation of $1,521 \pm 22$ degree-days (DD) °C, which corresponds to late June-early July in northern Kentucky. Chemical applications applied during this time period should be effective against the crawler stage.

Sampling Procedure: Begin monitoring degree-day accumulations from 1 January using a base threshold of 4.44°C. Consider applying insecticides against *M. obscura* crawlers after $1,521 \pm 22$ DD have accumulated.

Notes: While the mean degree-day accumulation of $1,521 \pm 22$ DD gave a close prediction of crawler hatch in other states, this model should be used with caution outside of northern Kentucky until it has been validated with local temperature data.

The peak activity period of the primary parasites of *M. obscura* is also in July. Application of chemical controls against *M. obscura* crawlers will have a negative impact on these parasites. Consider reserving insecticide controls for trees in stressed conditions, but refraining from treating otherwise healthy trees in order to conserve natural enemies.